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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/593,761	06/14/2000	YUTAKA YANO	169078/99	8044

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EXAMINER

PHAN, HANH

ART UNIT PAPER NUMBER

2633

DATE MAILED: 01/15/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,761

Applicant(s)

YANO, YUTAKA

Examiner

Hanh Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 14-19 is/are rejected.
- 7) ☒ Claim(s) 6-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 09/29/2003.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 are rejected under 35 U.S.C. 102(e) as being anticipated by Tochio (US Patent No. 6,215,567).

Regarding claim 1, referring to figures 3 and 17, Tochio teaches a wavelength-division multiplexed optical transmission system for transmitting an optical signal using frames via an optical fiber transmitting line (i.e., optical fiber, Fig. 3), comprising a device (i.e., scramble processing unit 50 and control of the scrambler 12A, Fig. 17) for reducing mutual interference among a plurality of wavelength which are transmitted through a same optical fiber transmitting line (col. 19, lines 4-67, and col. 20, lines 1-37).

Regarding claim 2, Tochio further teaches a transmitter for converting an inputted electric signal into the optical signal and transmitting the optical signal and a receiver for receiving said transmitted optical signal (Figs. 1-3).

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Regarding claim 3, Tochio teaches further comprising any one of:

a unit for mutually differing transmitting frame phases between at least two or more wavelength channels among a plurality of wavelength channels which are transmitted through a same optical fiber transmitting line;

a unit for inserting mutually differing dummy data patterns which are different each other among the wavelength channels; and

a unit for scrambling said electric signals with mutually different scrambling patterns (i.e., scramble processing unit 50 and control of the scrambler 12A, Fig. 17, col. 19, lines 4-67, and col. 20, lines 1-37).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tochio (US Patent No. 6,215,567) in view of Hadano (Europe Patent No. 0543327 A1).

Regarding claim 4, Tochio differs from claim 4 in that he fails to teach a frame phase updating unit. However, Hadano teaches a frame phase updating unit (col. 3, lines 12-30 and see abstract section). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the frame phase updating unit as taught by Hadano in the system of Tochio. One of ordinary skill

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in the art would have been motivated to do this since Hadano suggests in column 3, lines 12-30 that using such a frame phase updating unit has advantage of allowing maintain correlation of the data pattern between the channels to secure stable transmission quality.

Regarding claim 5, the combination of Tochio and Hadano teaches a frame configuration unit for configuring frames of wavelength channels from a signal to be transmitted to the optical fiber transmitting line and selecting an output signal frame phase itself at random (Figs. 3 and 17 of Tochio, col. 3 of Hadano, lines 12-30).

6. Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tochio (US Patent No. 6,215,567) in view of Katta et al (US Patent No. 5,706,346).

Regarding claim 14, referring to figures 3 and 17, Tochio teaches a wavelength-division multiplexed optical transmission system for transmitting an optical signal using frames via an optical fiber transmitting line (i.e., optical fiber, Fig. 3), comprising a device (i.e., scramble processing unit 50 and control of the scrambler 12A, Fig. 17) for reducing mutual interference among a plurality of wavelength which are transmitted through a same optical fiber transmitting line (col. 19, lines 4-67, and col. 20, lines 1-37).

Tochio differs from claim 14 in that he fails to teach a dummy data generating circuit. However, Katta teaches a dummy data generating circuit (3)(Fig. 1A, col. 6, lines 35-67, col. 7, lines 1-67 and col. 8, lines 1-51). Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate the

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dummy data generating circuit as taught by Katta in the system of Tochio. One of ordinary skill in the art would have been motivated to do this since Katta suggests in column 6, lines 35-67, col. 7, lines 1-67 and col. 8, lines 1-51 that using such a dummy data generating circuit has advantage of allowing maintain correlation of the data pattern between the channels to secure stable transmission quality.

Regarding claims 15 and 16, the combination of Tochio and Katta teaches the dummy data generating circuit further comprising a circuit for using a pattern which is different each other by depending on a transmitter and selected at random as an invalid data pattern (Fig. 1A of Katta).

Regarding claim 17, the combination of Tochio and Katta teaches the dummy data generating circuit further comprising a controller for monitoring and setting an invalid data pattern of the wavelength channels, wherein the controller has means for setting a dummy data pattern of transmitters so as to mutually differ the invalid data patterns among the wavelength channel group which is transmitted through the same optical fiber transmitting line (Figs. 3 and 17 of Tochio and Fig. 1A of Katta).

Regarding claim 18, the combination of Tochio and Katta teaches further comprising a device generating different transmitting frame phase of channels if at least two wavelength channels among a plurality of wavelength channels have the same phases (Figs. 3 and 17 of Tochio and Fig. 1A of Katta).

Regarding claim 19, the combination of Tochio and Katta teaches further comprising a device generating random transmitting frame phase of channels if at least

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two wavelength channels among a plurality of wavelength channels have the same phases (Figs. 3 and 17 of Tochio and Fig. 1A of Katta).

Allowable Subject Matter

7. Claims 6-8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments


8. Applicant's arguments with respect to claims 1-5 and 14-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh Phan whose telephone number is (703)306-5840.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached on (703)305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.


Hanh Phan
01/09/04